



# NMR&D News

Navy Medicine Research  
and Development

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## Daniel Passes the Torch, Haberberger Continues the Mission

By Soni Fitzhugh

Administrative Liaison to OCONUS Labs

CAPT Richard Haberberger relieved CAPT J. C. Daniel as Commanding Officer, Naval Medical Research Center (NMRC) and Director, Navy Medicine Research and Development (NMR&D) during a change of command ceremony held at the Silver Spring, Maryland facility August 21. More than 200 staff, family, friends and guests attended the ceremony, including guest speaker RADM Thomas R. Cullison, the Bureau of Medicine and Surgery deputy surgeon general, and RDML Richard C. Vinci, Commander, Navy Medicine Support Command in Jacksonville, Florida and Chief of Navy Dental Corps.

Captain Haberberger holds a Ph.D. in Community Health (Epidemiology) from Southern Illinois University and an Executive M.B.A. from Colorado Technical University. He was the Executive Officer at NMRC from 2003 to 2006 and returns to NMRC from the Tri-Care Management Activity, OSD(HA). He is a Fellow of the American College of Epidemiology.

During his speech, Haberberger said, "I am deeply honored and privileged to stand here before you as the new commanding officer of the Naval Medical Research Center...I am cognizant of the sacrifices many of you have made to be here today, and I want to thank you."

Haberberger also thanked his family



CAPT Haberberger assumes command



CAPT Haberberger addresses the audience after relieving CAPT Daniel

for their sacrifices in support of his career, and also noted the vast enterprise that is NMR&D.

"The charge before me now is to lead the medical research efforts of the United States Navy and manage the precious resources - both personnel and material - entrusted to me," said Haberberger. "To facilitate what new invention, products and information the worldwide Navy medical R&D enterprise can muster and to support and defend those who wear 'the cloth of our nation' on the battlefield and in our world-class healthcare system."

CAPT Daniel will report to the U.S. Army Medical Research and Materiel Command at Fort Detrick, Maryland as the deputy commander. During the ceremony, RDML Vinci presented CAPT Daniel with the Legion of Merit for exceptionally meritorious conduct in the performance of outstanding services and achievements at NMRC.

Before reading his orders, CAPT Daniel highlighted many of the accomplishments of his three years as NMRC commanding officer and thanked the

men and women of NMR&D, saying, "Clearly, the award that I received today is due to your efforts, and I am eternally grateful to have been able to count on your tremendous support these last three years. I know that I can count on you to continue your steadfast efforts under CAPT Haberberger's leadership."

NMR&D encompasses nine U.S. Navy biomedical commands and detachments throughout the United States and around the world.

The change of command ceremony is a time-honored product of the rich heritage of Naval tradition. It is customary that this ceremony be formal and impressive, designed to strengthen respect toward the authority vital to any military organization. The heart of the ceremony is the formal reading of official orders by the officer to be relieved and the relieving officer. Command passes upon utterance by the relieving officer, "I relieve you, Sir!" and the response by the officer being relieved, "I stand relieved."

Photos by Phillip A. Collins



### Commanding Officer's Message

Officers, Enlisted, Civilian, LES and Contractor Support Staff of the Navy Medical Research and Development Enterprise:

It is my distinct honor to serve as your new Commanding Officer of the Naval Medical Research Center and Director of the Navy Medicine Research and Development enterprise. It has been said that "to whom much is given, much is required," and I assure you the message is not lost on me. Navy medical research has a rich history of significant contributions to our Navy and our nation as well as the world at large. I accept this awesome responsibility with all humility but the confidence and resolve to provide you with a healthy, friendly and adequately resourced work environment that is intellectually stimulating and challenging. I pledge to advocate for you wherever and whenever I can. With your assistance, we will tell our story to market our science and our capabilities to current and potential sponsors. In return, I expect your best effort at what I and many others consider the most important job in your career, to serve as a Force Health multiplier for the men and women of our armed forces during wartime, by delivering medical research and development products and information to our naval forces.

I would like to thank my immediate predecessor, CAPT Daniel, for an outstanding job. Over the past few weeks I have come to realize his significant contributions to our Navy medical R&D enterprise. I know he will be missed, but in his new position he will facilitate our forging ahead in our joint mission with our Army colleagues to bring the men and women who wear the "cloth of our nation" on the battlefield and in our healthcare system the best products of our medical research and development efforts.

In the coming weeks and months, I look forward to meeting each of you and visiting your command to get a better understanding of what you do for the warfighter and what I can do to assist you. Our task is a noble one, and our only option is to succeed.

Commanding Officer sends,

Richard L. Haberberger, Jr.  
CAPT, MSC, USN

Men and Women of Naval Medical R&D,

It has been a distinct privilege for me to serve as your Commanding Officer for the past three years. I have continually been impressed and inspired by the awesome talent, boundless enthusiasm and unwavering dedication you bring to work every day in order to create solutions for the health, safety, readiness and human performance challenges of our Sailors, Marines and Joint Warfighters. Certainly, our mission has never been more important. And while directly supporting those who wear the cloth of our Nation and their families, so much of your work has also brought, and continues to bring, benefits to our fellow citizens, not only in our country and in those of our Labs, but throughout the world!

It has been a true blessing to have had the best job in the Navy – being surrounded by great people, all doing extremely important work on behalf of America's heroes, and in so doing, improving people's lives around the world. Thank you and BZ, Shipmates!

v/r

J. Christopher Daniel  
CAPT, MC, USN



## From Bench to Battlefield

By Dr. Keith Prusaczyk  
Director, NMR&D Medical  
Development Program

The Medical Development Program focuses on producing equipment, techniques and concepts that reduce morbidity and mortality of our service members. A primary goal is to enhance the logistic feasibility of delivering state-of-the-art medical care and ensuring that our personnel are medically qualified and optimally prepared for duty. The program serves as the Navy's Advanced Medical Development agent, acting as a transition point for new capabilities delivered to the Fleet and Marine Forces. Our primary role is supporting the Surgeon General to effectively execute Navy Medicine's mission



*The current casualty evacuation system*

in support of the Chief of Naval Operations.

Navy Medicine supports both Navy and Marine Corps operations, providing essential care in hostile environments and ensuring continuity of care throughout the Joint Operational environment. In support of that mission, the Medical Development Program focuses on producing equipment, techniques, and concepts that reduce morbidity and mortality, closing Capability Gaps and enhancing the operational effectiveness of Sailors and Marines.

Recent program advancements include:

### USMC En Route Care

Monitoring, Oxygen, Ventilation, and External Suction (MOVES) - MOVES was developed to reduce the logistic burden experienced by the U.S. Marine Corps during patient movement and to provide vital patient support during casualty evacuation and en route care. This device is scheduled to enter low-rate initial production in November 2009.

PAXlight - Already in production, the PAXlight is an LED-based surgical lamp being deployed with the Forward Resuscitative Surgical System. It is lighter, brighter and longer-lived than



*The new MOVES system*

the lamps currently in use.

### Wound Management Program

Between point of injury care and comprehensive rehabilitation lie a complex series of events that we call "Wound Management." This is a collaborative effort involving multiple partners and funding sources.

Biomarker Panel - Identifying indicators of wound and body physiological status indicating the wound is ready to close. The benefits of this program can be characterized in multiple ways. In addition to more efficient personnel and resource use, this program has a substantial fiscal impact, if fully realized.

Heterotopic Ossification (HO) - Bone forming where there should not be bone, or more bone than is needed to do the job, is emerging as a characteristic of combat wounds. We are working on methods to mitigate the negative effects on wound healing and on rehabilitation and prosthetic fit and function.

## Scenes from the NMRC Change of Command Ceremony

Photos by Phillip A. Collins



## NAMRL Works to Improve Training Effectiveness Evaluations

By Dr. Richard Arnold  
Research Psychologist, NAMRL

The key to an effective training system is its ability to help personnel develop appropriate skills and knowledge. Training effectiveness evaluation (TEE) is the measure of this skill transfer and is performed via training transfer studies that assess student performance before, during and after training. But studies are often time-consuming and expensive; as a result, they often are not performed. One current Naval Aerospace Medical Research Laboratory (NAMRL) project is investigating faster, less expensive means to perform TEE utilizing subject matter expert ratings to model training transfer.

Sponsored by the Office of Naval Research under the Human Performance, Training and Education pro-

gram, this project is evaluating three Marine Corps systems used to train Fire Support Teams (FiST). FiST teams coordinate fire – air, mortar, artillery and sometimes naval gunnery – to support Marine infantry maneuver elements.

In 2008, NAMRL researchers performed a detailed task analysis of the FiST mission. In 2009 they are applying the results of the task analysis to determine what an “ideal” FiST trainer would look like in terms of the tasks it should focus on most. Marine FiST instructors are assisting the effort by providing ratings on these critical tasks for two different simulation-based trainers and for live fire training. The ratings received by each training system will be compared against actual student performance in each trainer over time. Results will determine whether expert



ratings of the trainers are predictive of actual training system efficacy. If successful, the process will be applied to a different training domain – motor convoy operations – in 2010 to assess the generalizability of the modeling approach. The goal is to provide training developers and practitioners a time- and cost-effective means of evaluating training effectiveness in instances when a full-scale training transfer study cannot be performed.

## NHRC Redesignated as DoD Deployment Health Research Center

By CAPT Kerry Thompson, Dr. Frank Garland and Dr. Karl Van Orden

The Naval Health Research Center (NHRC) began investigating population health issues among Navy and Marine Corps personnel over 25 years ago. Developing and integrating large databases related to medical records and career/deployment records, NHRC created the Career History Archival Medical Personnel System (CHAMPS) to enable groundbreaking epidemiological studies on medical issues related to Navy and Marine Corps occupations,

duty stations and deployments. Likewise, NHRC’s human performance, behavioral sciences and modeling and simulation teams focused on issues related to expeditionary operations and warfare.

NHRC’s research capabilities were central to identifying deployment related health issues in the first Gulf War. Subsequent concerns over Gulf War Illness and related interest in respiratory disease surveillance and research prompted DoD Health Affairs to fund research to study the health-related issues as a function of deployments for

all DoD personnel in a systematic and sustained manner. As such, NHRC was designated as the DoD Center for Deployment Health Research on September 30, 1999, by the Assistant Secretary of Defense for Health Affairs (HA). (Walter Reed Army Medical Center and the U.S. Army CCHPPM were designated the DoD Centers for clinical matters and surveillance, respectively.) Current large-scale efforts include the Millennium Cohort Study and the Expeditionary Medical Encounter Database. In June of 2009, DoD HA reaffirmed the role of NHRC.

## NMRC/WRAIR Celebrate Organization Day with Picnic, Sports

By LT Michael Prouty  
Chairman, NMRC MWR Committee

The second annual Naval Medical Research Command/Walter Reed Army Institute of Research Organizational Day picnic was held August 5 at the Forest Glen Annex pavilion and softball fields. The day provided the two commands with the opportunity to thank command members for their hard work as well as to foster joint Army-Navy participation.

The day kicked off with the tradi-

tional Army-Navy sports competition, which saw athletes from both commands contend with one another in volleyball and softball. Despite a valiant effort by NMRC staff members, Army was able to prevail and take the trophy this year.

Throughout the day a variety of activities were offered for the enjoyment of members of the command and their families. Parties by Terrye provided arts and crafts as well as temporary tattoos for the children. Children and their parents also had the opportunity



*COL Kent Kester and CAPT Chris Daniel address the crowd on O-Day*

# Lean Six Sigma - Improving Efficiency, Cutting Costs

By CAPT David Street  
NMRC Business Development Officer

Navy Medicine Research and Development welcomes CDR Ed Hilyard as Naval Medical Research Center **Area of Responsibility (AOR)** Lean Six Sigma (LSS) Black Belt. The LSS program is mandated across the Department of Defense and the Navy, and the Bureau of Medicine and Surgery (BUMED) mandates that LSS concepts be applied across Navy Medicine to reduce costs and improve our business efficiency. CDR Hilyard, a Navy microbiologist and currently the Deputy Director of the NMRC Infectious Diseases Directorate, will lead the implementation of LSS across the Enterprise. He completes the four-week Black Belt training program in September and assumes duties from CAPT David Street, who detached from NMRC on August 19.

CAPT Street, an Aerospace Experimental Psychologist, Acquisition Professional and member of the Defense

Acquisition Corps, was the first NMR&D AOR LSS Black Belt. He leaves NMRC to join the Office of the Secretary of Defense for Health Affairs. CAPT Street led the implementation of the NMR&D Strategic Plan and LSS program since August of 2008. During his tenure, LSS resulted in savings in moving and relocation costs at NMRC Peru, led by LSS Green Belt LCDR Amanda Massey; savings in immunization program cost avoidance, led by LSS Green Belt CDR Trupti Brahmbhatt of NMRC; pending savings in consumable ordering by LT Todd Myers of NMRC; a significant reduction in general overhead at the Naval Aerospace Medical Research Laboratory, led by LSS Green Belt Dr. Richard Arnold and Officer-in-Charge and LSS Champion CDR Rita Simmons; an increase in competitive quality pre-proposals for the BUMED **Innovative Laboratory In-house Research** program, led by LSS Green Belt Dr. John Thomas; a reduction in human use protocol approval review and routing at NMRC, led

by CDR David Fryauff; and a 20 percent reduction in correspondence routing time, led by CAPT Street and LSS Champion CDR Eric Hall and the NMRC Administrative Team.

CDR Hilyard assumes the reins of the NMR&D LSS program as BUMED implements the continuous process improvement system (CPIMS) and mandates that all Navy Medicine units apply LSS principles and initiate projects that will be monitored in CPIMS. Farewell to CAPT Street and welcome aboard to CDR Hilyard!



CAPT David Street  
Photo by Soni Fitzhugh

## O-Day (continued)

to participate in competitions such as water balloon toss and relay races.

Members of both commands enjoyed a catered lunch that included BBQ chicken, hamburgers, hot dogs and vegetarian options. The NMRC Morale, Welfare and Recreation committee, in conjunction with the Army O-Day Planning committee, worked tirelessly to organize the event and raises funds. A big thank you to everyone who supported O-Day by donating money at one of the fundraising events held throughout the year.



CAPT Daniel and his family enjoy the O-Day picnic

## Board of Directors Meeting at NMRC

The commanding officers, officers in charge, and other key personnel from NMR&D labs worldwide met at NMRC in August for a board of directors meeting.



CAPT Kerry Thompson, Ron Steed, CAPT Vincent DeInnocentiis, CAPT David Southerland, CDR Gail Chapman, Dr. Jerry Lamb, CAPT Richard Haberberger, CDR Richard Erickson, CAPT J. Christopher Daniel, CDR John Sanders, Cheryl Carr, CAPT Ken Earhart, CDR Eric Hall, Dr. Adam McKee, Dr. Keith Prusaczyk, CDR Rita Simmons, CAPT Eileen Villasante, Rick Arnold, CAPT Steven Sidoff, and Dr. Stephen Walz - Photo by Phillip A. Collins

News from the Laboratories

## Naval Submarine Medical Research Laboratory

By Kastley Marvin, Research Assistant, NSMRL Research Directorate



For more than 50 years the Naval Submarine Medical Research Laboratory (NSMRL) has provided focused submarine, diving and surface research solutions to enhance the health and performance of our warfighters. What started as a two-person operation during World War II has grown into a 55-person lab at the forefront of undersea and human performance research. The lab currently occupies three buildings on Submarine Base New London in Groton, Connecticut. Our facilities include two hyperbaric chambers, a 1,000 cubic meter anechoic chamber, a reverberant chamber, ten soundproof audio testing booths, and vision/auditory testing

suites. The lab's location gives us ready access to the population we strive to help - the waterfront (submarines and diving) and Submarine School students.

Ongoing research includes watch-standing studies of the current 6/12 schedule as compared to novel schedules modeled on fatigue factors, psychological screening of Basic Enlisted Submarine School students and submarine atmosphere health assessments. Current projects range from evaluating submariner eyewear to underwater acoustic bioeffects studies to audiological monitoring of Littoral Combat Ship crews. Examining human underwater sound localization abilities, conducting nitrogen narcosis studies, determining the human effects of an unambiguous warning laser, evaluating multi-modal tools for increased situational awareness in sonar, analyzing submarine mishaps and evaluating

competing Submarine Escape and Immersion Equipment (SEIE) suit models are a few projects that underscore the broad capabilities and interests at NSMRL.

In the coming year we are looking forward to building renovations that will consolidate our work space to two buildings and update our facilities. The renovations will improve the lab's ability to continue providing research-based solutions to the submarine force to protect and improve the health and performance of the warfighter.



SEIE suit study

### Hail and Farewell

*Fair winds and following seas to...*

**HMC Ariel Diaz**, who is retiring after a 20-year Navy career. HMC Diaz's final assignment was as Senior Enlisted Advisor at NMRC.

**CAPT J. Christopher Daniel**, who leaves his position as Commanding Officer, NMRC to serve as Deputy Commander of the U.S. Army Medical Research and Materiel Command. See page 1 for additional information.

**CAPT David Street**, who leaves his position as NMRC's Business Development Officer to join the Office of the Secretary of Defense for Health Affairs. See page 5 for additional information.

*Hail to...*

**CAPT Richard Haberberger**, the new NMRC Commanding Officer and Director of NMR&D. See page 1 for additional information.

**CDR John Hughes**, who recently joined NMRC's Trauma and Resuscitative Medicine Department.

**LT Kristina Carter**, who is currently assigned to NMRC's Biological Defense Research Directorate.

**LT Andrea McCoy**, a recent addition to the U.S. Military Malaria Vaccine Program.

### Promotions

*Congratulations to...*

**ND1 Jack McPherson**, Naval Submarine Medical Research Laboratory, Groton, Connecticut, who has been selected for advancement to NDC.

**LT David Cepeda**, Medical Service Corps, Naval Medical Research Center Detachment, Lima, Peru, and **LT Brent House**, Medical Service Corps, Naval Medical Research Unit Three, Cairo, Egypt, who have been selected for advancement to LCDR.

### NMR&D News

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